APPENDIX A

2.   (New) An apparatus for providing an auxiliary pilot comprising:

2   a first source configured to provide pilot data;

        a second source configured to provide a pilot Walsh sequence, the pilot Walsh

4   sequence comprising a concatenated sequence of a basic Walsh sequence and a

        complementary sequence of the basic Walsh sequence; and

6   a processing element configured to cover the pilot data with the pilot Walsh

        sequence and communicatively coupled to said first source and said second source.

3.   (New) The apparatus as claimed in claim 2 wherein the basic Walsh

2   sequence comprises an all zeros sequence.

4.   (New) The apparatus as claimed in claim 2 wherein the basic Walsh

2   sequence is 64 chips in length.

5.   (New) The apparatus as claimed in claim 2 wherein the pilot Walsh

2   sequence is 128 chips in length.

6.   (New) The apparatus as claimed in claim 2 wherein the pilot Walsh

2   sequence is 256 chips in length.

7.   (New) The apparatus as claimed in claim 2 wherein the pilot Walsh

2   sequence is 64 times K chips in length, where K is a number of pilot Walsh sequences

        available.

8.   (New) The apparatus as claimed in claim 2 wherein the pilot Walsh

2   sequence comprises a K-bit sequence of a Walsh code mapping and wherein each bit

        of the K-bit sequence is substituted with a basic Walsh sequence or a complementary

4   sequence depending on a value of the bit.

8

9. (New) The apparatus as claimed in claim 8 wherein the complementary

2 sequence is derived by inverting each bit within the basic Walsh sequence.

10. (New) The apparatus as claimed in claim 8 wherein the complementary

2 sequence is a second basic Walsh sequence.

11. (New) The apparatus as claimed in claim 2 further comprising a gain

2 element configured to adjust gain of the auxiliary pilot based on gain of a

particularized transmission wherein the auxiliary pilot is transmitted and

4 communicatively coupled to said processing element.

12. (New) The apparatus as claimed in claim 2 wherein a length of the pilot

2 Walsh sequence is minimal based on a number of required pilot channels.

13. (New) The apparatus as claimed in claim 2 wherein one auxiliary pilot is

2 provided for each particularized transmission.

14. (New) The apparatus as claimed in claim 2 wherein the pilot data for all

2 auxiliary pilots is identical.

15. (New) The apparatus as claimed in claim 2 wherein the pilot data for all

2 auxiliary pilots comprises an all ones sequence.

16. (New) The apparatus as claimed in claim 2 wherein the pilot data for all

2 auxiliary pilots comprises an all zeros sequence.

17. (New) An apparatus for receiving an auxiliary pilot, comprising:

2 a processing element configured to accept a pilot signal to provide pilot data;

9

a first accumulator configured to accumulate the pilot data over a length of a

4   basic Walsh sequence to provide I and Q pilot values and communicatively coupled to said processing element; and

6   a second accumulator configured to accumulate the I and Q pilot values for a current interval and previous intervals in accordance with a pilot hypothesis and to

8   provide a decovered pilot, and communicatively coupled to said first accumulator.

18.   (New) The apparatus as claimed in claim 17 wherein the length of the

2   basic Walsh sequence is 64 chips.

19.   (New) The apparatus as claimed in claim 17 further comprising a

2   comparator configured to compare the decovered pilot against a set of predetermined thresholds and communicatively coupled to said second accumulator.

20.   (New) The apparatus as claimed in claim 17 further comprising:

2   a comparator configured to compare the decovered pilot against a set of thresholds and communicatively coupled to said second accumulator; and

4   a storage element configured to add to a candidate set stored therein a particularized transmission corresponding to the decovered pilot if the decovered pilot

6   exceeds an add threshold and communicatively coupled with said second accumulator.

21.   (New) The apparatus as claimed in claim 20 wherein said storage

2   element is further configured to remove from the candidate set stored therein a particularized transmission corresponding to the decovered pilot if the decovered pilot

4   is below a drop threshold.

22.   (New) The apparatus as claimed in claim 20 wherein said storage

2   element is further configured to add to an active set stored therein a particularized

10

transmission corresponding to the decovered pilot if the decovered pilot exceeds an

4   add threshold.

23.   (New) The apparatus as claimed in claim 20 wherein said storage

2   element is further configured to remove from the active set stored therein a

particularized transmission corresponding to the decovered pilot if the decovered pilot

4   is below a drop threshold.

24.   (New) An apparatus for providing particularized transmissions,

2   comprising:

a first processing element configured to cover a traffic channel of each of the

4   particularized transmissions with a Walsh sequence, wherein each traffic channel is

covered with a different Walsh sequence; and

6   a second processing element configured to cover pilot data for each of the

particularized transmissions with pilot Walsh sequences, wherein each pilot is covered

8   with a different pilot Walsh sequence, the second processing element

communicatively coupled to the first processing element.

25.   (New) The apparatus as claimed in claim 24 wherein the pilot Walsh

2   sequences are derived from a basic Walsh sequence.

26.   (New) The apparatus as claimed in claim 25 wherein the basic Walsh

2   sequence is Walsh sequence zero.

27.   (New) An apparatus for providing improved performance in a

2   particularized transmission, comprising:

a first processing element configured to cover traffic channel of the

4   particularized transmission with a Walsh sequence orthogonal to Walsh sequences of

surrounding transmissions; and

6   a second processing element configured to cover pilot data of the particularized

transmission with a pilot Walsh sequence orthogonal to pilot Walsh sequences

8   covering pilot data of the surrounding transmissions and communicatively coupled to

the first processing element.

28.   (New) The apparatus as claimed in claim 27 wherein the pilot Walsh

2   sequence is derived from a basic Walsh sequence.

29.   (New) The apparatus as claimed in claim 28 wherein the basic Walsh

2   sequence is Walsh sequence zero.

12